



Chapter 932

Galt Traffic

Galt Airport, Greenwood, IL (10C)



The monthly newsletter from Galt Airport and EAA Chapter 932

December 2010

Picture of the Month



This wintry shot of Dan Johnson in his Piper Cub on skis was taken in March this year by Steve Mark. Dan took Steve up to take a picture of Galt covered in snow from the air and once the Galt picture was taken care of, the flight progressed to Camp Lake, and then where ever the snow and ice looked good.

Steve Mark Remembered

By Beth Rehm

We lost a good friend and long-time chapter member recently – Steve Mark died November 13, aged 54.

An avid aviation enthusiast, Steve joined the chapter at Galt in September 2000. He quickly became an active and dedicated member of the team contributing to cookouts, helping to paint the hangar, co-chairing events, attending the Oshkosh work weekends and serving on various committees. Three years after joining the

chapter, Steve was elected to the secretary's position and served from December 2003 to November 2004.

In the last few years Steve was enjoying some notoriety for his other major passion, photography. For his project "Uncontrolled Airspace," Steve chose to shoot scenes at Galt Airport in 4 x 5 inch large format black and white using studio and press equipment from the 40s and 50s

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Editor's Note

As a special tribute to Steve Mark, the front and back pages of the newsletter this month have been deliberately printed in black and white.

Ironically, I had already selected Steve's picture of the Piper Cub (left) for the December picture of the month before we received the sad news of his death. Steve had sent me a selection of pictures from that snowy photo shoot last April and I was saving them to publish in a 'wintery' month.

The aerial shot of the airport on the back page is also one of Steve's photographs, shot for his ongoing Uncontrolled Airspace project. I sure appreciate his allowing me to include his work in our newsletter.

Beth Rehm, PMP
Editor



Steve Mark, EAA Chapter 932 member from 2000 to 2010.

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– an era in which high resolution and studio lighting were hallmarks of the photography profession. Steve would often take months to plan a specific shot, and some of his photographs took several days to get the image he

County and grew into a collection intended for a coffee table book. Over the course of the project Steve shot more than 400 black and white photos capturing the essence of life at this tiny rural airport we all love so much.

He began with displaying some photographs at local coffee shops and in May 2009 Galt Airport hosted an exhibition of his pictures that was attended by more than 200 visitors. His work was published in Vintage Airplane and EAA Warbirds newsletters and two of his photographs were selected for the front and back covers of the



This amazing shot of a P-38 is a rare color photograph from Steve Mark. Steve had a great time at Oshkosh AirVenture this year and sent me several wonderful pictures for the newsletter. He always seemed to pick the most unusual angles to shoot from.

was looking for.

Many of you generously gave your time to help Steve with the project that began in 2008 as a class assignment for the College of Lake



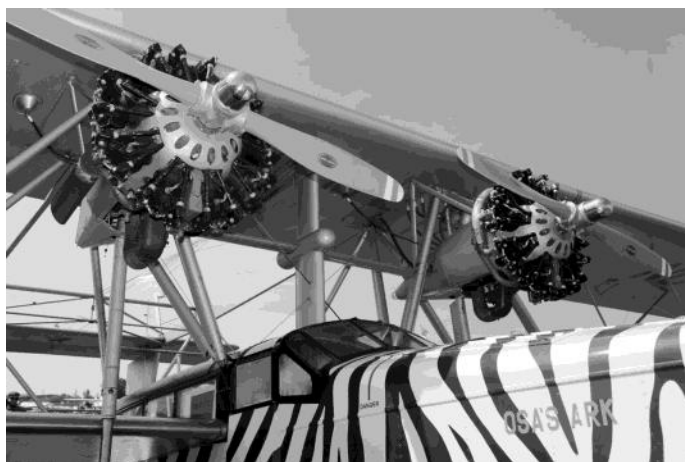
Steve Mark, pictured here with the camera equipment he used for his Uncontrolled Airspace project. The picture was taken by Jeff Hill, Sr. and first appeared in the April 2008 issue of Galt Traffic.

EAA Gathering of Eagles brochure in 2009. The Gathering of Eagles is an annual fundraising dinner held during EAA AirVenture attended by philanthropists from all over the world. The EAA also exhibited a selection of photographs from the Galt project in the Hanson Gallery at the EAA Museum in Oshkosh, WI during AirVenture 2009 and the exhibition ran through October that year. The EAA web site maintains a gallery of Steve's photos from the Uncontrolled Airspace exhibition at the following link: <http://www.eaa.org/apps/galleries/gallery.aspx?ID=137>.



Steve co-chaired and cooked at the Chilifest event in 2002.

Steve's photography and Galt Airport received national exposure when the Smithsonian Air & Space magazine ran several of the photos from the Uncontrolled Airspace exhibit in the "Sightings" column of their October/November 2009 issue. Although modest by nature, Steve was extremely proud of this particular achievement.



Another great shot from Oshkosh this year. The Sikorsky S-38 Amphibian by Steve Mark.

I hope Steve knew how much we appreciated the publicity he brought to the airport through his photography and how proud we all are of his work. We are very lucky to have his photographs to remember him by.

EAA Showcases Arts and Crafts

By Beth Rehm

As I was meandering through the EAA AirVenture Museum on a recent visit to Oshkosh, an unusual exhibit caught my attention.

It was a brightly colored showcase of aviation themed quilt blocks.

At first this arts and crafts presentation seemed to be a bit out of place in a museum devoted primarily to displaying original and replica aircraft and associated paraphernalia. But after studying them more closely, I realized that these quilt blocks were truly an artistic celebration of aviation.

Each of the quilt blocks honored aviation in its own unique way; from personal ownership experiences to broader commemorations of the history of flight.

It turns out these beautiful quilt blocks were the winning entries, and a selection of other submissions, from the 2010 EAA Aviation Quilt Block Contest.

The competition, now in its tenth year, showcases the creativity of



A selection of quilt block entries from the 2010 competition are currently on display at the EAA AirVenture Museum in Oshkosh, Wisconsin.

quilters from across the United States and all over the world with their aviation themed quilt blocks.

Entries are now being accepted for the 2011 contest. Each quilt block may include vintage or contemporary aircraft or even representations of the many propeller shapes and must be no larger than 12 inches square, bound or unbound.

Each quilt block must be accompanied by a story about the design and the stories are included in the judging process.

The quilt blocks will be judged by experienced quilters from the Lakeside Quilters Guild in Oshkosh, WI.

The winning entries along with a selection of others will be framed and displayed in the EAA AirVenture Museum in Oshkosh, WI during EAA AirVenture 2011 and for another 12 months after that.

The deadline for submitting entries is June 1st 2011. You can find more information, a complete list of the contest rules and copies of the

entry forms at the following EAA web page;

http://www.airventure.org/attractions/quilt_contest.html

This web page also displays the winning entries and a selection of others from the 2010 competition and includes the stories submitted with each quilt block.



The fourth place winner in the 2010 contest was SR-71 Blackbird created by former CIA employee, Linda R. Dixon from Gaithersburg, MD.



Andy's Airplane, sewn by Elaine Anderson, Hot Springs, SD, received an honorable mention in the 2010 competition.

Three Ways to Break the Ice

By Eric Rehm

I had Galt's Piper Warrior scheduled a few weeks ago to fly to Champaign Illinois for the University of Illinois vs. Minnesota football game.

I went to school at the U of I in the 90's and ever since my freshman year my parents have had U of I football season tickets. Every year one football game is designated as "Dad's Day" and my Dad and I get together to tailgate and root for the Illini. This year November 13th was designated as Dad's Day and I had my doubts about being able to go from 10C to CMI, but I put my name on the schedule anyway and hoped for the best.

Sure enough when I awoke and checked the weather, CMI was showing low ceilings, rain and a temperature of 45°F. The weather system affecting CMI was forecast to travel north and cause the same conditions in the Chicago area when I was planning on returning.

Because airframe icing can start at +2°C, I figured the conditions at altitude were ripe for light to moderate mixed icing. This was reinforced by the icing forecast which had the freezing level at 4000 feet with icing forecast at 3000 feet and above.

I have been in my share of icing conditions over the years and I did not relish flying an aircraft that only had pitot heat for ice protection, so I reluctantly canceled my reservation and started driving. During my three-hour journey, I had lots of time to reflect on the three airplanes I have flown in my career that were certified to fly into known icing conditions.

The first aircraft was an Aero Commander 500B which was equipped with an anti-ice system. There are two kinds of ice protection

systems; anti-ice and de-ice. Anti-ice systems get rid of ice before it forms and de-ice systems allow ice to form before removing it.

During the winter of '95 I logged many hours flying canceled checks around the state of Michigan, also known as "the ice machine," and into Chicago. My company had chosen the TKS™ or weeping wing system and was given approval by the FAA

There was a time limit in that when the fluid ran out, you run out of ice protection. My aircraft had a tank that held enough fluid for two hours on normal and one hour on high. This never posed a problem for me because my leg lengths were only one hour and I always kept some extra fluid in a jug in the aircraft just in case I needed to top off the tank.

TKS™ can also get pretty messy



One of Central Air's Aero Commander fleet on the ramp in Grand Rapids, Michigan. You can see the titanium panels on the leading edges of the wings and the horizontal stabilizer. Photograph by Beth Rehm.

for FIKI.

TKS™ uses porous laser drilled titanium panels that are installed on the leading edges of the wing and tail surfaces, a slinger ring on the propeller and a spray bar on the windshield. An ethylene glycol based fluid is secreted through the wing and tail panels and onto the props via a series of tubes to keep the aircraft free of ice. The fluid is contained in a tank and is metered from a pump. On my aircraft there were two pumps, a primary and a backup, with two settings; normal and high.

The system itself worked well although there were a few drawbacks.

because the fluid gets slung off the props and secreted onto the wings and the aircraft gets bathed in the ethylene glycol mixture. It doesn't hurt the aircraft or its paint, but you have a dripping wet aircraft when you land. Not ideal for a post flight inspection or unloading freight.

One other idiosyncrasy was the windshield spray bar. When a button was pressed in the cockpit some ethylene glycol fluid was sprayed onto the windshield a lot like your car windshield wiper fluid does. However, the Aero Commander didn't

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have windshield wipers so if you were picking up ice on an approach, you had to carefully time the spray to remove the ice and allow time for the ethylene glycol to dissipate from the slipstream so that when you broke out of the clouds you would have a clean windshield.

All in all I loved TKS™ and was thankful everyday that I had it installed on the Aero Commander. I just had to turn it on before I got into icing conditions and then it was a worry free flight as far as icing was concerned. I would definitely recommend it. This system is available for a lot of general aviation (GA) aircraft. It adds very little weight and a whole lot of utility.

My next job was at a regional airline that flew Saab 340s. The Saab is a 34-seat twin engine turbo prop airliner. This was a huge step up for me in my career and I was sure the ice protection system on this plane would be even better than my beloved Aero Commander, or so I thought.

The Saab's windshields, various probes and propellers were anti-iced with electrical heat. The props were made of a composite material and thus had temperature limits when you could turn the heat on but I never found that to be a problem. The engine nacelles were anti-iced with electrical heat as well as with "bleed air."

Bleed air is a term turbine pilots use to sound clever but in fact is a pretty simple concept. It works by "tapping" hot air from the compressor stage of a turbine engine and routing it via pipes to various different areas of an aircraft. In the Saab's case it went to the engines. This worked

pretty well although the Saab did not have overly powerful engines so when the engine anti-ice switch was turned on, you lost a lot of performance.

The wings were equipped with de-ice boots. Boots are old technology and have been around since the 1920s and in fact many World War II bombers had them installed. They are installed in many turboprops because they weigh very little and do not have

always flying with some degradation of performance.

In addition, I always found that when the boots were inflated only some of the ice broke off and some stayed on, leaving new and interesting crevices for more ice to build upon. If you were a good Saab pilot you always hunted for altitudes that had less icing and monitored the ice build up on the wings before things potentially got out of hand. The good news was the Saab had a straight wing that was easily viewed from the cockpit side windows so I was able to keep tabs on the ice accumulation. Indeed it seemed that I spent at least half of my time looking out the side windows and the other half on the instruments when I was flying in icing conditions.

Early on flying the Saab I was a bit leery of flying it in ice. But as my experience and knowledge grew over four and a half years, I became very fond of the air-

craft and as long as I was vigilant, felt quite safe flying in icing conditions.

In 2001 my little regional airline was swallowed up by a much bigger regional airline, American Eagle Airlines, and I transferred to new equipment; the Brazilian built Embraer 145. The Embraer is a 50-seat twin turbojet regional airliner.

Like the Saab, the windshields and various probes are heated electrically. The wings and tail however are anti-iced with a bleed air thermal anti-icing system.

The Embraer's engines are quite powerful, putting out 7400 pounds of thrust each and thus have plenty of power to spare. When called for, the



First Officer Eric Rehm pre-flights the Business Express Saab 340 at La Guardia Airport, New York. Photograph taken by Captain Kostas Ptenis.

a time limit like TKS™. The idea is pretty simple. A thick rubber membrane is stretched across the leading edge of a wing or tail surface. As icing begins to develop, a pneumatic system (again using bleed air from the engines) rapidly inflates the boots with compressed air. The expansion of the boot cracks off the ice which is then blown away by airflow. The boots are then deflated, returning the wing to its normal shape. That is the theory anyway.

The disadvantage of this system is that ice has to build up on the airframe before it can be shed. Any amount of ice adversely affects the performance of an aircraft and the Saab was no different. So while flying the Saab in icing conditions you were

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Airport Technicalities

A monthly report from Justin Cleland, Airport Manager, Galt Airport.

Was it me, or was this fall one of the nicest we've had in years?

There were a few stretches where there wasn't any bad weather for weeks... our flight school airplanes got a great workout! It's hard to admit it's over (and that it's time to start plowing again), but December is now upon us.

As the inevitable snowfall arrives, we'll be out in the truck and tractor clearing it away. If you are planning on flying in the days following a snowstorm, please let me know as soon as possible and I'll make sure your hangar is clear. Also, I know

quite a few folks are planning on flying ski-planes this year, so if there is anything we can do to assist in getting your plane to/from the runway, please don't hesitate to ask.

Speaking of cold weather, the winter supply of "Galt Gear" has arrived at the FBO. Make sure you stop in if you're in need of a sweatshirt or winter hat. Also, if you were planning on having anything custom made for Christmas gifts, please let me know right away. We have a large order going in for embroidery the first week of December.

I hope to see you all at the holiday party, but if I don't, have a safe and relaxing holiday season and see you in 2011!

ANNOUNCEMENTS

Licenses & Ratings

Congratulations to Kent Lutes on his first solo flight November 15. Kent is taking his private pilot instruction with CFI George Rigert.

Fuel Price

The current price of 100LL for Galt tenants is \$4.35, including tax.

FBO Holiday Hours

Christmas Day (Saturday, December 25th) - Closed.

New Year's Day (Saturday, January 1st) - Closed.

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wings and tail are heated with hot air tapped from a high pressure engine compressor stage which is routed via a series of pipes instantly vaporizing any ice forming droplet before it can form. In order to keep the leading edges from melting, the hot air is exhausted overboard via slots under the wings. The engine inlet lips are also heated this way.

Because the pilots sit far forward of the swept wing, it is impossible to look out the side windows to see if ice is forming. Embraer came up with a brilliant automatic ice detection system to help the pilots know when ice is forming. Two small ice detector probes situated on either side of the aircraft's nose are set to vibrate at a particular frequency. If ice begins to form on the probes, the frequency it vibrates at changes and triggers the anti-ice system to come on. The icing signal remains active for sixty seconds

and the probe is heated, removing the ice and restoring it to vibrate to its original frequency. It then cools down and begins to monitor for icing conditions again. This is by far the best system I have ever worked with. It is completely automatic, very reliable and causes no degradation in performance.

On November 13th, the Illini (a 21-point favorite) lost by 4 points so my drive home felt even longer than three hours. But the meteorologists got the forecast right that day and as I approached the Chicago area the ceilings (which had raised in Champaign) lowered ominously, the rain started in earnest and the temperature dropped



An American Eagle ERJ 140 on the ramp at O'Hare International Airport (ORD). Photographer unknown.

to 40°. I was glad I hadn't attempted a flight but I couldn't help but think, wouldn't it be nice if Galt would install TKSTTM on the Warrior...

Eric Rehm is the Assistant Chief Pilot for American Eagle Airlines at O'Hare and a Captain on the Embraer RJ145. He has been flying since he was fifteen, is a CFII and has accumulated over 6,600 flying hours. Despite not yet owning an airplane, he spends all his spare time at Galt airport!



Brian's Brainteaser

A monthly puzzle from Brian Spiro, Director of Aircraft Maintenance, Galt Airport.

Brian has noticed things being moved around in the shop lately and he suspects that gremlins have been messing with his tools.

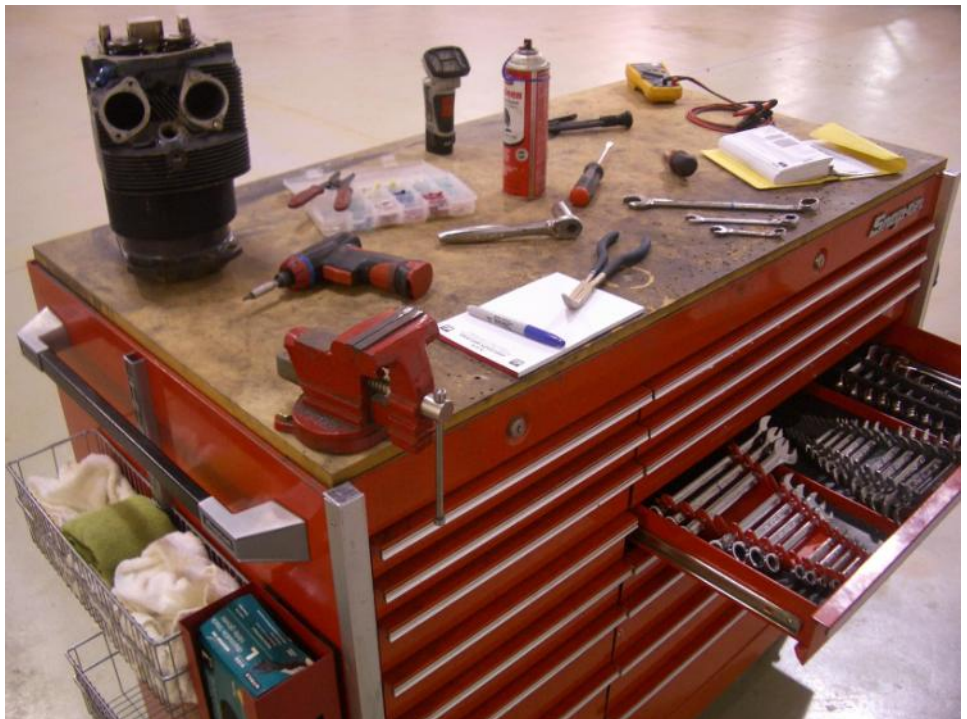
Determined to get to the bottom of this mystery, Brian took a picture of his toolbox before he left for the night and took another picture when he arrived back at work the next morning.

What did the gremlins do to Brian's toolbox?

Brian says that eight items have been messed with by the gremlins. If you think you know what they are, or even if you don't, please send your best guesses to Brian Spiro via email at maintenance@onezerocharlie.com before 12/28/2010. The winner of the December Brainteaser will win a free Galt baseball cap.

Here are the answers to last month's Young Eagles brainteaser:

1. Chapter 932 flew their first Young Eagles at Galt back in **2006**.
2. There were **five** Young Eagles rallies held at Galt Airport this year.
3. We flew an amazing total of **two hundred and five** (205) Young Eagles at Galt Airport in 2010!
4. A hungry Brian consumed **eight** delicious hot-dogs during the May 15th rally, one for every Young Eagle he flew that day!
5. We used **thirteen** different types of aircraft to fly Young Eagles this year.



No one was able to guess the correct answers so unfortunately there was no winner for the November puzzle.



Letters to the Editor



Jack Weiss enjoying the scenery in the rear seat of Jeff Hill's Aeronca L-3. Photograph taken by Jeff Hill, Sr. from the front seat.

In last month's issue of Galt Traffic I incorrectly identified Jeff Hill Sr.'s Aeronca L-3, using the Army Air Corps serial number (the big yellow numbers on the vertical stabilizer) as the aircraft's N-number.

The correct N-number is in fact N48118, which is barely noticeable in small black characters on an olive drab (OD) background just forward of the horizontal stabilizer. Jeff says it is legal to use these numbers on historic restorations like his.

Jeff kindly informed me that military aircraft serial numbers have always been assigned to the manufacturer when the contracts to purchase were signed. The numbers are assigned according to the following system: the first two numbers are the decade and year it was made. In the case of his L-3 which was built in 1942, the first two numbers are therefore 42-. The 4 and the dash are not painted on the A/C as all A/C built in the 40's would start with a 4, and



Jeff Hill flying Young Eagles in his beautifully restored Aeronca L-3 on July 10th 2010. Photograph taken by Justin Cleland.

three letter radio call signs would not work well.

The full identification number (42-36317) along with the other basic specifications are stenciled on the left side of the A/C just aft of the boot

The photograph you featured in the November 2010 EAA 932 newsletter (see *Picture of the Month* on page 1) brought back a warm feeling.

In August 2006, before I soloed as a Certified Ultralight Pilot, I flew with Jeff Hill, Sr. over the Woodstock countryside. Here is the picture he took of me while I was at the controls. The smiles and the views in each photo are nearly identical—although my right wing was a little low!

Thanks again, Jeff, for a great and memorable ride.

Jack Weiss.

cowl - again, black on OD and not very noticeable.

Jeff thinks similar identification mistakes may have saved him from being reported to the FAA once or twice!

EAA Chapter 932 News

Election Results

At the November 13th chapter meeting the chapter members voted to re-elect Dean Marcott as Chapter Treasurer for the 2011-2012 term.

The membership also voted to appoint Mike Evans as the Chapter Secretary for 2011-2012. Their terms officially begin in December and run for two years through November 2012.

We appreciate their willingness to volunteer their time and effort to serve the chapter.

The chapter would like to thank Ron Twinn for his services as Chapter Secretary over the past few years.

December Meeting

We will take some time in the December meeting (Saturday, 12/11/10) to plan activities for next year. Every-



Our new EAA Chapter 932 Secretary, Mike Evans.

one is welcome to contribute to this discussion because we want the chapter activities to reflect what the members are interested in doing.

Please take some time to think about what you would like the chapter to do next year and come to the meeting prepared with your ideas. If

you can't make the December meeting, please email your ideas to the board members.

We will go out to lunch together after the discussion.

New Chapter Member

Please join me in giving a warm welcome to Laurens Ackerman who joined chapter 932 at the November 13 meeting.

Laurens spends his summers in Stevensville, Montana where he is building a Zodiac 601XLB and is a member of EAA chapter 517.

He spends the winter months in Wilmette, IL, which is why he was looking for a local EAA chapter to join.

Complimentary EAA Trial Membership

If you are not currently a member of the Experimental Aircraft Association (EAA) and have not been a member in the last three years, we are excited to be able to offer you a free 6-month trial membership, courtesy of chapter 932.

You will receive the full member benefits for the 6 month trial period including a subscription to Sport Aviation, EAA's awesome monthly magazine and even discounts on EAA merchandise.

In addition, you will also be granted a complimentary chapter 932 membership for the same period. Contact Beth Rehm at bethrehm@comcast.net for details.

GET INVOLVED!

ENJOY THE CAMARADERIE OF OTHER AVIATION ENTHUSIASTS AT GALT AIRPORT

EAA Chapter 932

Monthly events include a variety of social and educational programs that focus on enjoying aviation activities together and promoting aviation in our community.

2010 Galt Airport/EAA 932 Calendar of Events

December 11 EAA Chapter meeting 10:00 a.m.

December 11 Galt Airport Holiday Party, 6:00 p.m. in the FBO.

See the EAA Chapter 932 Web Site at <http://www.eaa932.org> for a complete list of events for Galt Airport, FOG and EAA Chapter 932.

Other Aviation Events

December 9 EAA Chapter 252 Meeting & Tour of the Founders' Wing, EAA Museum, Oshkosh, WI (OSH)

December 21 EAA Ultralight Chapter 41 General Meeting, 6:00-9:00 at Brennand Airport, Neenah, WI (79C)

January 20, 2011 EAA Chapter 252—The Future of 100LL, 6:00-9:00 at Wittman Airport Terminal Bldg, Oshkosh, WI

January 29, 2011 EAA SportAir What's Involved in Kit Building Workshop, EAA Museum, Oshkosh, WI (OSH)

January 29/30, 2011 EAA SportAir Sheet Metal Workshop, EAA Museum, Oshkosh, WI (OSH)

January 29/30, 2011 EAA SportAir Fabric Covering Workshop, EAA Museum, Oshkosh, WI (OSH)



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Galt Airport Information



Galt Field Airport

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Facebook: <http://www.facebook.com/home.php?#!/pages/Wonder-Lake-IL/Galt-Airport/140642945955189>



AVGAS

Galt Tenant Price

\$4.35
(includes tax)

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